

INTISARI

Penyakit bercak ungu dan layu fusarium merupakan penyakit penting yang menjadi kendala dalam budidaya tanaman bawang merah. Penggunaan PGPF merupakan salah satu alternatif dalam upaya pengendalian hayati penyakit tersebut. Penelitian ini dilakukan untuk mengetahui kemampuan jamur rhizosfer sebagai PGPF dan antagonis terhadap *Alternaria* sp. dan *Fusarium* sp., patogen pada bawang merah. Jamur rhizosfer diisolasi dari lahan pesisir pantai di Sanden dan Srandakan, Bantul. Dari hasil isolasi diperoleh 31 isolat jamur dan 22 diantaranya bersifat hipovirulen. Terdapat 5 isolat yang dikategorikan sebagai PGPF yaitu isolat A2SP, A2TP, HCTM, PMH, dan PTH1. Seluruh isolat mampu menekan pertumbuhan *Alternaria* sp. dan *Fusarium* sp., penekanan tertinggi terjadi pada perlakuan isolat PTH1 dengan daya hambat berturut-turut sebesar 32.19% dan 51.53%. Isolat A2SP dan A2TP merupakan jenis *Penicillium* sp. sedangkan isolat HCTM, PMH, dan PTH1 merupakan jenis *Aspergillus* sp. Isolat PMH dan HCTM tidak disarankan untuk digunakan sebagai PGPF dan antagonis karena mampu menghasilkan aflatoksin.

Kata kunci: jamur rhizosfer, PGPF, antagonis, *Alternaria* sp., *Fusarium* sp.

ABSTRACT

Purple blotch and fusarium wilt disease are common diseases that become obstacles in shallots cultivation. The use of PGPF is an alternative in the biological control of this plant diseases. This study is aimed to see the ability of rhizosphere fungi as PGPF and antagonist fungi against *Alternaria* sp. and *Fusarium* sp., the causal pathogens of shallot. Rhizosphere fungi were isolated from coastal land in Sanden and Srandakan, Bantul. There were 31 fungi isolated and 22 of them were hypovirulent. The test showed that 5 isolates are categorized as PGPF i.e. A2SP, A2TP, HCTM, PMH, and PTH1. The result showed that all PGPF isolates could inhibit the growth of *Alternaria* sp. and *Fusarium* sp., the highest inhibition occurred from the treatment of PTH1 with percentage of inhibition 32.19% and 51.53%, respectively. A2SP and A2TP isolates were *Penicillium* sp. while HCTM, PMH, and PTH1 isolates were *Aspergillus* sp. PMH and HCTM isolates are not recommended to be used as PGPF and antagonist because both can produce aflatoxins.

Keywords: rhizosphere fungi, PGPF, antagonist, *Alternaria* sp., *Fusarium* sp.